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WEEKLY STATION REPORTS

OF THE DIVISION OF

DRY LAND AGRICULTURE

BUREAU OF PLANT INDUSTRY

U. S. DEPARTMENT OF AGRICULTURE

Not for publication without
prior consent of this division.

REPORT FOR WEEK ENDING OCTOBER 5, 1935.

HUNTLEY:

Clear skies and moderate temperatures have continued throughout the week, which conditions have been favorable for the harvesting of sugar beets, potatoes, and third cutting of alfalfa, and for threshing beans in this locality. Planting of fall wheat on the dry land farms is still under way with most of the seed going into dry soil. A few farmers are delaying seeding in hope that moisture will be received to germinate the seed of downy bromegrass and permit its destruction before planting wheat on the field. Inspection of the winter wheat and rye sown on the Dry Land plots has shown seed of these crops to be still unsprouted. Field work during the week has consisted of miscellaneous clean-up jobs and husking corn. Due to drought and grasshopper injury to the crop, the yield of ear corn is very light and practically not worth husking on most of the plots.

Maximum temperature, 82°; minimum, 33°; precipitation, None.

SHERIDAN:

Clear weather, warm during the day and with cool nights, prevailed over the entire week. All corn stover and Sudan grass and all sorgo except some south of the highway was shredded with the old thresher. Corn in the rotations was sacked in order that it might be hauled on short notice of a change in the weather but was left in the field to dry as long as possible. Other work consisted mainly in cleaning grain and work on pasture fences. Rye for spring pastures was sown.

Maximum temperature, 82°; minimum, 33°; precipitation, None.

MANDAN:

Agronomy - The past week continued dry, and temperatures dropped to the lowest for the season. Potatoes in the rotations were dug early in the week. The average yield was about 130 bushels per acre.

Rainfall for September was 0.22 inch, which was over an inch below normal. The total precipitation for the year to date is 16.46 inches, compared with the 60-year average of 14.54 inches.

Maximum temperature, 80°; minimum, 18°; precipitation, None.

Cooperative Grazing Experiment - The cattle appear to be doing well on the pastures, but the cool weather will likely cause them to shrink in weight.

Horticulture - Potatoes were dug on October 1 and 2. Early Ohio and Warba were the highest yielding varieties under test. Irish Cobblers were comparatively poor this year. Low yields were the rule, due to the dry weather prevailing during the past few months. However, yields were considerably higher than last year. Late varieties were particularly affected by the late season drought as regards yields, but they matured better than usual.

Dead trees in the breeding blocks are being removed. Waneta trees in the pruning experiment were pulled, as over half of them were dead, and uniform comparisons were no longer possible.

Garden vegetables have been harvested and are being stored in the root cellar.

Arboriculture - The taking of fall notes in the various tree blocks has been completed during the week. Collection of Russian olive seed is in progress at the present time. Chokecherry seed has been stratified temporarily until fields are ready for planting it. The plowing of nursery tree stock has commenced under extremely dry soil conditions. If rainfall is not received in the near future, this will make the third consecutive year when it has been impossible to heel-in the trees in the nursery fields on account of dry soil. Chinese elm and honey locust seedlings had not set terminal buds when the growth was checked by heavy frosts.

BELLE FOURCHE: REPORT FOR TWO WEEKS ENDING OCTOBER 5, 1935.

The first few days were comparatively hot, but moderate fall weather prevailed thereafter. The first frost of the season occurred the morning of October 1, the temperature dropping to 31° for a short time and causing slight injury to tomato vines and other tender crops. Frost damage was more extensive on October 3 and 4. The temperature on the latter date went down to 26°, and remained below freezing for over 5 hours. No measurable amount of precipitation was received, and not more than a trace has been recorded since September 2. The precipitation for September, 0.14 inch, was next to the lowest of record; and for July to September, inclusive, it was the lowest of record. A total of 1.55 inches precipitation was received in July, August, and September, as compared to the 27-year average of 5.22 inches for the 3-month period.

The soil is drier than it has been at any time during the past 10 years, and no germination of fall grain has taken place on the various cultural treatments, including summer fallow. Corn fodder from the various plots harvested in August was weighed and stacked, and plowing of corn stubble land was completed.

Maximum temperature for two weeks, 90°; minimum, 26°; precipitation, Trace.

ARCHER:

During the past week the weather was clear and mild, except during forenoon of October 4 when threatening clouds appeared. Work at the station consisted of fall plowing in the experimental field and the seeding of winter wheat and winter rye in the dairy field. The shocked corn is drying, and the potatoes are ready for digging. The potato crop at the station will be very light, due to drought and purple top.

Maximum temperature, 76°; minimum, 34°; precipitation, 0.01 inch.

AKRON:

Clear weather favored field work. The harvesting of the grain sorghums was completed and a start made toward threshing the prosos and foxtail millets. Winter wheat stands have improved some on the rotation corn land plots since the rainfall reported last week. These plots may yet enter the winter with up to 100 percent stands. Emerged winter wheat continues to make slow growth.

John H. Martin visited the station Friday.

Maximum temperature, 80°; minimum, 33°; precipitation, None.

NORTH PLATTE:

Cool, dry weather has prevailed. Temperatures of 27° and 25° at the bench station on the 3rd and 4th removed any doubt of the occurance of killing frost. No threat of rain has occurred. The absence of clouds has caused a wide range between day and night temperatures.

Winter wheat has emerged with good stands. Early seedings have continued growth regardless of dry soil at the surface. No field work has been done during the week on the S.L.A. project. Work on the buildings is being pushed and should be completed in two or three weeks.

Maximum temperature, 80°; minimum, 25°; precipitation, None.

COLBY:

This week has been dry and cool. So far there has been no frost injury. Feed crops are making very little growth, however, even where they are still green. Winter wheat planted before the rain is coming up very slowly. A crust about an inch thick has formed on the surface making penetration rather difficult. The cool weather has also retarded germination. Where the rain was no heavier than here at the station it appears that satisfactory stands will be obtained. It is coming through unevenly.

The sorghum plots were cut during the week with a grain binder. Except along the edges where additional moisture was available, the plants were generally less than 2 feet in height. No heads were produced, except here and there along the edges.

Maximum temperature, 79°; minimum, 34°; precipitation, None.

Precipitation for September, 1.69 inches; for January-September, 10.07 inches.

TUCUMCARI:

Weather was warm and dry the past week, with crops maturing rapidly. Seeding of second date of wheat plots, binding of some early sorghums, and continuation of cowpeas and bean harvest were performed. Considerable binding and heading will be done the coming week.

On a trip to Woodward this week those in the party agreed that while the northern panhandle may be out of the dust bowl it is still far from being out of the drought area. Ranges have improved materially, but crops were as a rule poor, spotted, and drought injured. Very few good fields of sorghum were seen on a 700 mile trip. Recent rains in some localities have permitted germination and emergence of wheat, which in some cases is in excellent condition, but in many more localities wheat is not seeded or was dusted in. Precipitation the next two months will determine whether a large portion of the northern panhandle will be subject to severe soil blowing next spring, in case wind movement is normally high.

Maximum temperature, 89°; minimum, 41°; precipitation, 0.01 inch.

DALHART:

The frost reported for the end of the previous week proved to be rather spotted in the territory covered and also for the damage done to crops. Crops on the station that were not too severely dried to show damage had the leaves severely frosted. No plants were completely killed. Work during the week has consisted of harvesting drilled feed crops, shocking cowpeas, harvesting soybeans for seed, picking jujubes, pulling broomcorn, and completing the labelling of seed heads. The jujube crop this year was the largest by far that has ever been produced on the station.

Maximum temperature, 88°; minimum, 34°; precipitation, 0.21 inch.

BIG SPRING:

Weather conditions have remained warm and dry during the past week, which were very favorable for crop maturity. Cotton is not opening to any extent as yet, but milo is maturing fast. Most of the milo plots in the rotations were headed during the week, and heading work on

the increase milo will be started during the coming week.

With the exception of a few plots, all the varieties of the varietal date plots of grain and forage sorghums are harvested. Other work has consisted of hauling in cowpeas from the rotation plots and reworking the terrace north of the rotation field.

W. H. Black of the Bureau of Animal Industry and J. M. Jones of the Animal Husbandry department of the Texas Station spent two days here during the week in the interest of cattle feeding experiments for the coming winter.

Maximum temperature, 85°; minimum, 40°; precipitation, None.

WOODWARD:

The rainfall for June 1 to September 30 was 4.32 inches as against a mean of 10.91. Consequently there is practically no moisture in the soil, except on early prepared fallows, which have retained much of the heavy May rainfall. Farmers, consequently, are becoming much discouraged over prospects for winter wheat. There is decidedly less tendency this year than usual to plant wheat "dry" and hope for a rain.

The "sorriest" row crop this year is milo. Very rarely has failure with this crop been so general. Nearly every other sorghum did better. Kafirs matured more grain than conditions seemed to warrant. Drought and cool nights are bringing fall colors to tree leaves. Station work for the week consisted principally of harvesting kafir, alfalfa, and broomcorn.

Maximum temperature, 90°; minimum, 44°; precipitation, None.

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REPORT FOR WEEK ENDING OCTOBER 12, 1935.

HUNTLEY:

A wet snow fell during the night of the 7th and although the amount of moisture received was small, the surface of the soil remained too wet for field work for a day or so. The precipitation also caused some delay to haying and bean threshing operations. The humidity remained high throughout the remainder of the week, and on some mornings the heavy dew resembled a light rain. On two mornings the landscape was shrouded in fog which left everything dripping.

Station work in connection with the Dry Land project has consisted of planting miscellaneous winter wheat plots, seeding part of the bunt nursery, and cleaning seed grains.

Maximum temperature, 80°; minimum, 28°; precipitation, 0.19 inch.

SHERIDAN:

Except for two days, during which there was a light snow, mild weather continued over the week. The first killing frost general over the entire station and over this section occurred the 10th.

Potatoes were dug and corn hauled from the rotations. Potatoes were just fair. The remainder of the sorgo also was hauled. Other work consisted mainly in cleaning grain and working on pasture fences.

Maximum temperature, 80°; minimum, 25°; precipitation, 0.12 inch.

DICKINSON:

Mild weather prevailed most of the week with a maximum temperature of 76° and a minimum of 15°. A trace of precipitation was recorded. Precipitation in 1935 to October 1 amounted to 13.7 inches, or 0.23 inch above normal. The last two months, however, have been very dry, only 0.07 inch being recorded in September and none to date in October.

Fall plowing was completed with a very rough, lumpy job because the soil was so dry. The gardens were manured and plowed. Winter wheat and rye seeded in dry soil have not yet germinated.

A very active demand continues for crested wheatgrass seed. Orders have now been received for all the seed available for distribution at this Station by the North Dakota Experiment Station.

Dr. P. F. Trowbridge, Fargo; and Mr. and Mrs. J. E. Norton, Moccasin, Mont. were visitors at the Station.

MANDAN:

Agronomy - Weather during the past week was favorable for outdoor work. Minimum temperature dropped to the lowest for the season. No precipitation was received, and the soil remains very dry. There has been no growth on crested wheatgrass this fall, except in a few low spots.

Maximum temperature, 82°; minimum, 13°; precipitation, None.

Cooperative grazing experiment - The steers appear to be doing well on the mature and dried vegetation. If weather stays favorable they will remain on pasture for at least another week.

Arboriculture - The plowing of nursery tree stock has continued during the week. Pulling of caragana seedlings is in progress at the present time. The soil is extremely dry and hard, and some stripping of

roots is apparent in pulling the stock. Considerable difficulty is experienced in temporarily heeling-in the trees, as it is almost impossible to get a shovel into the soil or to find loose dirt for covering the roots.

Collection of Russian olive seed has finished on the station, and work now is being performed on farms in the near vicinity.

Visitors for the week included J. E. Norton, Superintendent Judith Basin Sub-Station, P.F. Trowbridge, Director, N. Dak. State Experiment Station, L. S. Matthew and H.E. Engstrom, U. S. Forest Service.

BELLE FOURCHE:

The fore part of the week was clear and warm, but the temperature dropped 50° on October 8, and cold, cloudy, windy weather prevailed the following two days. The first snow of the season was received the morning of October 9. The precipitation was hardly more than sufficient to settle the dust for a short time, but it was the first measurable amount recorded in over five weeks.

Potatoes were harvested October 11, but the ground was too dry and hard to permit the use of a lister, and it was necessary to plow the potatoes out with a road plow. No precipitation in beneficial amounts was received after the potatoes were planted in the spring, and the yields were very light, averaging 35.9 bushels per acre with 48.6 per cent of marketable size.

Director J. W. Wilson, of the South Dakota Experiment Station, visited the station early in the week.

Maximum temperature, 81°; minimum, 28°; precipitation, 0.14 inch.

ARCHER:

During the week ending October 12 only a trace of precipitation was recorded. This was the result of a mist during the night of October 8. October 9 was cold and damp. The weather during the remainder of the week was very pleasant. Work at the station consisted of finishing up odd ends of threshing. The digging of potatoes is under way to-day. This crop is practically a failure.

Winter cereals seeded during early September appear better than they have for several years. The leaves of the trees and shrubs have taken on fall colors, and they are very beautiful at this time. The native grasses are practically dry. The curing process was slow. The shocked corn is nearly dry, and feed is plentiful.

The Burns High School agricultural class judged the station's dairy cattle October 9. Dr. G. H. Starr of the University of Wyoming made a study of the potato disease plot October 11.

Maximum temperature, 76°; minimum, 31°; precipitation, Trace.

NORTH PLATTE:

Cool, dry weather has prevailed. Below freezing temperatures have occurred nearly every night. The top soil has continued to dry out. Thick stands of volunteer wheat are showing signs of moisture depletion, and all fall seeded grain will be in poor condition to go through the winter unless additional moisture is received before the soil freezes. The dry weather has been fine for reducing the moisture content of corn, curing seed, and for the putting up of late feed crops.

Work on the D. L. A. project has been confined to building operations, and one-waying combined stubble land to kill volunteer wheat.

Maximum temperature, 80°; minimum, 23°; precipitation, None.

AKRON:

Proso and foxtail millets were threshed. These crops averaged 11.3 and 6.1 bushels, respectively, on two plots each on the rate and spacing corn project. Rate and spacing corn was husked, yields ranging from a low of 4.8 to a high of 15.3 bushels per acre.

Another light frost during the week, but tomatoes and garden beans have not been killed.

Maximum temperature, 80°; minimum, 29°; precipitation, None.

COLBY:

This week has been rainy and cool. Only a trace of moisture has fallen, however. The first killing frost of the fall occurred on the morning of the 10th. Most of the leaves of the sorghums were killed.

The winter wheat is practically up on all the plots. On the plowed plots the stand is rather thin. The wheat had difficulty in getting through the crust which formed after the rain the day after it was seeded, and many of the young plants were curling under the crust. All the plots were gone over twice, crosswise and lengthwise wherever possible, with the Campbell packer to break the crust and assist the young plants in coming through. This seemed to help, so that we now have tolerably good stands.

Maximum temperature, 74°; minimum, 27°; precipitation, Trace.

HAYS: Report for the week ending October 5, 1935.

The weather during the week has been generally clear but cool and very damp. The ground has been drying slowly, which delayed tillage work until the latter part of the week, since when all the plots on fields A, B, and C requiring tillage were either cultivated or one-way disked. All winter wheat plots in fields A and B were drilled today.

Maximum temperature, 82°; minimum, 39°; precipitation, None.

O. R. Mathews from the Woodward Field Station was a visitor Thursday and Friday.

HAYS: Report for the week ending October 12, 1935.

The weather during the first four days of the week was cool, cloudy, and threatening but resulted only in some fog and mist. The last two days have been part cloudy.

All winter wheat plots on field C were drilled Monday; all plots in field D were one-way disked on Tuesday and drilled Wednesday and Thursday. Borders and roadways were drilled Friday. Kafir was harvested today, Saturday.

The Experiment Station finished seeding winter wheat on the commercial fields and is now harvesting feed crops and filling silos.

Maximum temperature, 72°; minimum, 34°; precipitation, Trace.

GARDEN CITY: Report for the two weeks ending October 12, 1935.

Dry and clear weather has prevailed during the past two weeks. The soil is still too dry for wheat, and none has been planted on the station to date, except for a small field under irrigation. It is planned to do the planting next week, even though the soil remains dry, as that is about as late as wheat planting should be done. A few localities in this section have had fair rains, and wheat has been planted in those areas. Some of the farmers in areas that remain dry have also drilled wheat, but most of them are waiting for better moisture conditions.

Sorghum crops on unirrigated land on the station, and surrounding areas on similar soils, are failures because of the long continued moisture deficiency. Alfalfa and sorghum crops on irrigated lands of the

experiment station have produced well and have been harvested. Atlas sorgo was not quite mature, but a light frost on the night of October 9 did some damage and it was thought best to harvest all row crops that were still standing.

Field work for the past two weeks on the dry land project has consisted chiefly of springtoothing and otherwise preparing plots for the seeding of winter wheat.

Maximum temperature, 85°; minimum, 31°; precipitation, for the past two weeks, Trace; for the period January 1 - October 12, 8.18 inches; and for the past 21½ months, 15.26 inches. The normal precipitation for a twelve month period is 18.17 inches.

DALHART:

Normal fall weather characterized the past week. There were no frosts, no rains of consequence, and no wind to strong winds.

Forage crops were harvested during the week. Other work included the removal of seed heads, fall plowing after cowpeas, and soil sampling. Sorghums, where not frosted, are drying to maturity. A severe hail fell between Chamberlain and Conlen Tuesday night; plants were totally destroyed through the main path of the storm.

Maximum temperature, 85°; minimum, 35°; precipitation, 0.27 inch.

TUCUMCARI:

Continued drought has caused rapid maturity of sorghums, with lodging rather general. Heading of rotation milo plots and of milos in grain sorghum project, binding and shocking of other varieties in the grain sorghum project, and hauling and stacking of drilled sorgo increase have progressed during the week. Seed weights of cowpeas and beans have been obtained.

No frost has occurred, but drought and periods of high wind movement will doubtless necessitate cutting of all plot and increase kafir and sorgo the coming week. Aside from July plantings of the sorgo varieties and Atlas and Honey in the June plantings, practically everything should fully mature in the shock, although few plots are fully mature as yet.

Although only 6.13 inches precipitation was received in 1934, 11.30 inches in 1935 to the close of September, or a total of 17.43 inches over the past 21 months, the majority of station rotation plots will apparently yield from 75 per cent to 100 per cent of an average yield, counting all plots of a crop or variety as a unit. Individual plots, in many cases, will approach a failure.

Maximum temperature, 87°; minimum, 39°; precipitation, 0.07 inch.

BIG SPRING:

Weather conditions for the past week have remained favorable for crop maturity. Practically all variety and rotation sorghums have matured and have been harvested. Cotton is beginning to open, but will not be ready to pick for another two weeks or longer. Wheat plots have been disked and harrowed preparatory to seeding, but another shower will be needed before there will be sufficient moisture. Station work for the week has consisted heading milo in the rotation and variety blocks and spacing tests, cutting and shocking sorgo in the increase block, and cleaning and repairing equipment at the steer feeding pens.

Maximum temperature, 86°; minimum, 48°; precipitation, None.

LAWTON: Report for the two weeks ending October 12, 1935.

Warm, dry, sunny weather during the week ending October 5 was favorable to rapid maturity and opening of cotton. But the dry surface soil with no reserve moisture in the sub-soil left early planted wheat, oats, and barley in a severely distressed condition. The lack of moisture was also delaying early October seedings of small grain. A maximum temperature of 93° was recorded October 2.

The following week provided a sharp contrast in weather conditions that was unfavorable to cotton maturity and picking, but, at the same time, brought cheer to the small grain grower. A decided drop in temperatures, 1.64 inches precipitation October 7 - 9, and several days of cloudy weather put the small grain land in good shape. All seedings of wheat, oats, and barley on the station, with the exception of wheat drilled in cotton stalks and wheat on late shallow ploving and on disked stubble, are up to good stands.

Maximum temperatures, October 6 - 12, and minimum, Oct. 6 - 12, ranged from 63° to 83°, and 52° to 65°, respectively. The monthly precipitation in September of 1.82 inches was 1.31 inches below normal. The deficiency from January 1 to September 30 amounts to 4.79 inches.

WOODWARD.

Again no rain - and a couple of windy days have made sorghums wither and drop their leaves. The surface soil is drying more and more deeply, until all possibility of securing stands of winter wheat is gone.

The native asters are now glorious bands of blue and white. Heckrotti honeysuckle is making a last free show of bloom. A large variety test of early chrysanthemums makes a spot of beauty. Flowering willow, vitex, crapemyrtle and other summer blooming shrubs have practically ceased blooming, because of dry weather and cool nights.

Work of week has consisted largely of harvesting sorghums.

Visitors included Mr. Bates from Lake States Experiment Station, and Dr. L. S. Ellis, acting director of the State Experiment Station, and Ben Hibbs, Associate Editor of the Country Gentleman.

PENDLETON:

Dry weather continues in this section, at least an inch and a half of rain is needed to put soil in condition for seed bed preparation. Since July 1, only 0.54 inch of rain has fallen on the station. Lawns, flowers and shrubbery require irrigation. Flowers on the station grounds are still heavily loaded with bloom. Work on the station has consisted of harvesting corn, burning weeds along fence rows, cleaning seed, and working on reports.

Maximum temperature, 77°; minimum, 30°; precipitation, 0.08 inch.

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REPORT FOR WEEK ENDING OCTOBER 19, 1935.

JUDITH BASIN:

The feature of the past week was an all day rain October 15, when a total of 1.16 inches was received. This is the greatest amount that has been recorded in a 24-hour period since the latter part of July, 1934. Winter wheat that has not sprouted and died will benefit greatly from the storm and should emerge this fall. However, unless there is an unprecedented period of warm weather yet this fall, the growth will be scant. There has been considerable soil blowing on summer fallow fields the past four weeks, and it will probably increase in severity as the season advances.

The final results of the 1935 pasture experiments are as follows:

Item	Native	Bromegrass	Crested wheatgrass
Acreage	23.6	23.6	23.6
Number of animals	4	4	4
Date pasturing started	May 23	April 25	April 25
Date pasturing finished	July 31	August 29	September 24
Length of pasture season	70 days	126 days	153 days
Ave. initial weight	783.8 lbs.	742.1 lbs.	743.4 lbs.
Ave. final weight	948.8 lbs.	1033.8 lbs.	1063.3 lbs.
Ave. gain per steer	165.0 lbs.	291.7 lbs.	319.9 lbs.
Ave. gain per acre	27.97	49.43	54.23

In connection with these results it is interesting to note that the seasonal precipitation, April - September, 1935, was 6.49 inches compared to the average of 11.25 inches for that period.

Maximum temperature, 74°; minimum, 33°; precipitation, 1.16 inches.

HUNTLEY:

Rain early in the week kept teams out of the field for a day, but the moisture received locally was not sufficient to penetrate to the depth of seeding of fall grains. Farmers on the bench report the wheat to be sprouting, and in one instance the crop was said to be up. The precipitation should, however, be enough to germinate seed of downy bromegrass and facilitate killing the young plants on land yet to be sown to fall wheat.

Field work at the station has consisted of hauling and stacking corn fodder, and dismantling and storing pasture equipment.

Maximum temperature, 67°; minimum, 30°; precipitation, 0.30 inch.

SHERIDAN:

Ideal weather for this time of the year prevailed throughout this week, with the exception of a couple of windy days. Work during the week has consisted of fencing and other miscellaneous jobs.

Maximum temperature, 77°; minimum, 27°; precipitation, None.

MANDAN:

Agronomy - Weather during the past week has been very mild. High wind prevailed on one or two days, and the very dry conditions continue.

Maximum temperature, 83°; minimum, 28°; precipitation, None.

Cooperative Grazing Experiment - Steers on pasture appear to be doing well, and with the mild conditions should show gains for October.

Horticulture - The week has been spent in pulling out discarded trees in the breeding blocks and in digging and heeling-in nursery stock. A fairly large supply of fruit trees is available for sending to cooperating farmers. The ground is very dry and hard, making proper heeling-in difficult.

Gardens and other field plots for vegetable work have been cleaned, manured, and otherwise prepared for plowing. The soil is very dry and it may be impossible to make a good job of plowing, but as the danger of a severe insect infestation next spring is apparent, it is deemed advisable to have the work done this fall.

Flowerbeds about the grounds have been manured and spaded during the week, and, as most of the leaves have dropped off the trees, raking of leaves is in progress.

The usual display of bloom on the chrysanthemums at this time failed, due to the unusually heavy frost experienced earlier in the month. All numbers in the collection froze so severely that even the buds were killed.

Arboriculture - Pulling of nursery tree stock has continued during the week. The ground is so dry and lumpy that many roots are being badly stripped in the pulling operation. They are also being seriously exposed to drying, owing to the tree plows leaving the soil in cakes with many crevices. It is of course impossible at this time to determine whether or not serious damage is being done, but many roots, when removed from the soil, appear somewhat withered and similar to those left completely exposed.

Visitors for the week included H. J. Clemmer and A. T. Semple, Soil Conservation Service.

ARCHER:

The weather during the week ending October 19 was clear, mild, and pleasant, except on October 16 when it was cold and threatening. Cereals made good growth and on the whole are in good condition. Potato digging is coming to an and, and corn in the shock is dry enough for husking. Work at the station consisted of digging potatoes, husking corn, and starting work on WPA projects.

H. T. Gaylor of the U.S. Forest Service was a station visitor October 15.

Maximum temperature, 74°; minimum, 28°; precipitation, Trace.

AKRON:

The week has been favorable although there was too much wind on Monday for some types of field work. This wind, coming from the southeast, averaged 12.5 miles per hour for the 24-hour period and was noticeable as being the first demonstration of this nature since the middle of the summer. The highest velocity, 24.7 miles per hour recorded between 11:30 A.M. and 1:00 P.M., was not sufficient to cause any great soil movement.

Husking corn has been the field work of the week. The rate and spacing, the rotation, and the date of seeding projects were completed, and a start was made on the variety experiment. Rotation plots yielded from 4 to 22 bushels per acre, with apparent good response to different cultural treatments. The rate and spacing project produced closely in line with the established yields. These yields are as follow:

Spacing	Yield in bushels per acre
Rows 44 inches apart, plants 12 inches apart	7.4
" " " " " 18 " "	8.8
" " " " " 24 " "	9.4
" " " " " 30 " "	12.2
" " " " " 36 " "	14.2
" 88 " " " 12 " "	13.4

Winter wheat is making good progress, though a rain would doubtless help in producing the ground mat.

Maximum temperature, 82°; minimum, 30°; precipitation, None.

COLBY:

The weather continues dry and pleasant, except for an occasional windy day. On Tuesday it was very windy with considerable dust in the air all day and some soil ploving. Winter wheat is making slow progress. A rain is needed for the wheat to become more firmly established for the winter. Grasshoppers are still fairly numerous for this time of year. There has been no frost since the 10th.

Maximum temperature, 84°; minimum, 36°; precipitation, None.

HAYS:

The weather during the week has been varied between clear and cloudy and generally quiet except for one windy day. The temperatures ranged between 41° and 86°, and the surface-soil was dampened by a shower on the night of the 16th.

Conditions have been ideal for prompt germinations. Good stands of wheat are up on all plots regardless of preparation, except for being a little thin on the stubbled-in and burned-off plots which received no cultivation and slightly streaked on plots where the wheat was drilled in kafir stalks.

The work during the week has consisted wholly of collecting samples for soil moisture and the spreading of small amounts of poisoned-bran-mash for grasshoppers. Previous applications of poisoned-bran-mash have been effective, but there were still too many surviving grasshoppers in certain localities on the project.

The Experiment Station continues harvesting feed crops and filling silos.

Throughout this area, wheat is up to a good stand and more uniform than has been observed at this time of the year for many seasons. Generally the surface soil condition is ideal for germination regardless of the method of seed-bed preparation, but there are large variations in the amount of stored moisture depending on the management of the land during the summer. Late rains have encouraged late preparation and seeding of many acres which otherwise would not have been sown. Because of absence of earlier tillage, many of these fields have little sub-soil moisture and will be very largely dependent upon seasonable rainfall during the coming season.

Maximum temperature, 86°; minimum, 41°; precipitation, 0.39 inch.

TUCUMCARI:

Beautiful fall weather has prevailed the past week. No frost has occurred, and crops are maturing normally except where extreme drought existed. Areas in the wheat growing section of the county have had good rains this month, so much wheat is in excellent condition. Precipitation at the station totals only 0.74 inch for the past seven weeks.

Station work has included heading or binding sorghums, hauling cowpeas and beans, and preparation for sorghum threshing. Late sorghums still standing will doubtless be left until frost in order to mature so far as possible. One day's binding will complete all station binding.

Maximum temperature, 83°; minimum, 38°; precipitation, None.

DALHART:

Fall weather conditions have remained unchanged - dry, moderate temperatures, and variable winds. The work on the station has consisted chiefly of soil sampling, harvesting grain sorghum variety plots for forage, and picking cowpea seed. It is now planned to continue with the harvesting of grain sorghum plots (although a complete killing frost has not been received), as there is insufficient moisture to mature the grain even where prospects looked good two weeks ago for a fair crop. Without any reserve of moisture in the soil at the start of the crop season this past spring, the sorghum crops have reached rather intermittently throughout their period of growth several critical periods. In fact their growth has been marked by frequent periods where further growth was doubtful. The crops on the station this season have almost literally lived the proverbial nine lives of a cat.

Maximum temperature, 83°; minimum, 35°; precipitation, Trace.

BIG SPRING:

Light showers yesterday and the day before have halted field work, which was progressing nicely during the earlier part of the week under more favorable weather conditions. The increase block of Sumac sorgo was harvested and a fair yield was obtained. Heading of milo, in a large field, was started this week; however, showers halted this work before much progress had been made. Only light yields are anticipated because of the small, poorly filled, and unevenly ripened heads. This same condition is prevalent in rotation and variety plots, practically all of which have been harvested.

Other work for the week consisted of the continuation of cleaning and repairing of equipment for steer feeding project, which is to start within the next ten days.

Maximum temperature, 89°; minimum, 51°; precipitation, 0.89 inch.

WOODWARD:

The outstanding feature of the week was a gently falling rain totalling 0.90 inch distributed over a 2-day period. As a consequence of this rain, farmers are quite generally busy planting wheat. Owing to the very light rainfall since harvest, there is on may fields scattered grain that will now volunteer. But it is too late to allow this to germinate and then destroy it. It presents an uncertain factor in the coming season's crop. Moisture now in the soil is only enough to start wheat well - not to carry it long.

With dewy mornings the misty beauty of Perovskia is of even greater value. The attractive red blossoms of Heckrotti honeysuckle will be abundant until frost as they have been throughout the summer. Early chrysanthemums present banks of bloom.

Visitors of the week were Messrs. Karper, Quinby, and Stevens of the Texas Station force.

Station work for the week consisted principally of harvesting sorghum hay and grain.

Maximum temperature, 88°; minimum, 50°; precipitation, 0.90 inch.

N O T E:

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WEEKLY STATION REPORTS

OF THE DIVISION OF

DRY LAND AGRICULTURE

BUREAU OF PLANT INDUSTRY

U. S. DEPARTMENT OF AGRICULTURE

OCT 26 1936

Not for publication without
prior consent of this division.

REPORT FOR WEEK ENDING OCTOBER 26, 1935.

HUNTLEY:

The weather during the last week was clear and windy. Minimum temperatures each day were below the freezing mark, and vegetation which previously had escaped frost injury is now showing the effects of the cold. The soil moisture resulting from the precipitation of a week ago was lost through the action of drying winds of the last few days, leaving fall-sown grains still unsprouted in the plots.

Field work has consisted of hauling and stacking the remainder of the corn fodder, seeding crested wheatgrass in the horse pasture, and taking soil samples.

Maximum temperature, 70°; minimum, 18°; precipitation, None.

SHERIDAN:

Snow began to fall the evening of the 20th and continued through the most of the 21st, but netted only 0.28 inch of water. The snow was followed by the coolest weather of the season, with freezing temperatures each night since. The last few days were mild and pleasant during the day, however. Miscellaneous work with fences, corrals, and livestock sheds occupied the most of the week. Some gravel was hauled on the roads around the buildings.

Maximum temperature, 67°; minimum, 21°; precipitation, 0.28 inch

MANDAN:

Agronomy - The past week was mild and warm for this time of year. The early part of the week was somewhat raw and cloudy, and the lowest temperature for the season was recorded on the morning of the 21st.

Maximum temperature, 69°; minimum, 13°; precipitation, None.

Cooperative Grazing Experiment - The grazing experiment closed for the season during the week. As usual the cattle showed a slight loss for October. Had the weather been as mild early in the week as during the latter part, the steers might have shown a gain for the month

Following are the steer gains for October and for the season:

Pasture (acres)	No. steers	Gain per head (lbs) October	Gain per head (lbs) 145 days.
100	10	-13.5	366.0
70	10	- 8.0	358.5
70 (Rot.)	12	- 7.9	324.2
7 (Crested wheat)	7/1	- 6.4	269.3
93 (Reserve)*	7	-21.4	377.9

1/ On crested wheatgrass 90 days.

The gains on native pasture are the second highest since the experiment started in 1916.

Horticulture - Preparations for winter have been in progress during the week. Dead and semi-dead trees have been pulled in the orchards. Small fruits such as currants, gooseberries, and raspberries have been pruned and covered. Fruit trees, fruit crosses, and various fruit stocks in the nursery have been pulled and heeled-in.

Vegetable fields were plowed during the week. The soil is excessively dry everywhere, and the fields have been left in a cloddier condition than any time before.

Arboriculture - The pulling of nursery tree stock was completed during the week. Most of the nursery fields have been cleaned of small and discarded trees. Prof. J. A. Munro, Agent, and Collaborator with the Federal Horticultural Board, has commenced fumigation and inspection of the tree stock today.

Visitors for the week included Dr. M. M. Hoover and H. J. Clemmer, Soil Conservation Service, and Prof. J. A. Munro, N. Dak. State Entomologist.

ARCHER:

The weather during the week ending October 26 was more or less threatening, with a series of snow flurries October 25 and 26. This condition reminded one of early winter.

The afternoon of October 22 was spent traveling through eastern Wyoming and western Nebraska for the purpose of studying crop conditions. On the whole, winter wheat was in good condition. The stubbled-in winter wheat had made sufficient growth to give prospects of a good crop. That seeded on fallow had stooled well. A considerable portion of the fallow land was rather fine and therefore subject to blowing.

The corn crop was fair. A considerable portion gave the appearance of having been seeded without proper soil preparation. This crop showed a lack of timely tillage. No doubt these conditions were, in many cases, caused by the dry weather during March and April, the excessive moisture during May, and the dry weather which followed. The digging of a light potato crop was coming to a close. Some of the potato fields were as large as 150 acres. Winter grazing areas are very good and livestock are in a thrifty condition.

Work at the station consisted of husking corn. WPA work progressed both on the dam and tree work.

Director W. L. Quayle and County Agent, C. S. Llewellyn visited the station during the week.

Maximum temperature, 68°; minimum, 8°; precipitation, 0.13 inch.

AKRON:

The maximum temperature for the week was 77° last Sunday. Since Then, the weather has been decidedly cooler with a maximum of 60° for the six days. Minimum dropped to 15° on the night of the 22nd for the first hard freeze of the fall period. This probably was sufficiently cold to finish-off the grasshoppers which have been reported damaging winter wheat in some localities. It has also been a week-end of threatening weather with three separate measurable precipitations. Three weeks to a month is needed for the final clean-up of field work on the station and on adjoining farms.

Husking corn varieties was completed, also the threshing of the cultural plots of beans. A start was made toward threshing the bean variety experiment when the damp weather interfered. Indications are for about 300 pound per acre yield from the variety experiment. Grain sorghums are now ready to thresh, and this work will follow the threshing of the bean crop.

Emerged winter wheat is holding well on all soil preparations here on the station.

Maximum temperature, 77°; minimum, 15°; precipitation, 0.21 inch, largely as snow.

COLBY:

It has been rainy five of the last seven days, but almost no moisture has fallen. In this immediate locality winter wheat remains almost at a standstill. In parts of this section of the State, where

heavier rains fell during the last month, the wheat has made considerable growth so that it covers the ground on many fields, furnishing much pasture for livestock. A hard freeze on the morning of the 23rd killed practically all vegetation which survived the first killing frost on the 10th.

The sorghums and the last three plots of corn were hauled in and weighed this week. The three plots of corn, MC D, F, and G, the only ones which produced any grain, yielded 45 pounds of nubbins. The sorghums averaged from 100 to 1,600 pounds of forage to the acre. The feterita plots produced a few ripe heads of grain.

Maximum temperature, 30°; minimum, 23°; precipitation, 0.09 inch.

HAYS:

The past week was cool, generally cloudy, and damp. The conditions have been ideal for winter wheat, which for most part was seeded later than usual in this section. With the late start it has, it would seem that there is little danger of an excessive growth this fall and winter, such as sometimes follows September and October rains.

Work on the project during the week has consisted largely of soil moisture determinations. The Experiment Station today is finishing the job of filling nine silos with sorghum crops. The job was unusually slow because of the light crop. It has required a good many acres of crops to fill the silos.

Maximum temperature, 78°; minimum, 27°; precipitation, 0.29 inch.

TUCUMCARI:

The first raw, chilly weather of autumn occurred this week. Only 0.09 inch of precipitation occurred, but snow, sleet, mist, and fog alternated one entire day. Some vegetation was killed by a minimum of 30° on the 25th, but this was not a severe frost.

Sorghum binding and shocking was completed early in the week, with practically all milo plots headed. Some 15 late-date plots remain to be headed, but this work cannot be done until heads cure, even though they will not contain fully mature grain. The first picking of cotton was made, the little dwarfed plants yielding a surprising amount of seed cotton. Drilled sorgo on increase land was hauled to the horse barn, and final picking of cowpea seed was made. No threshing has been attempted; this work, completion of cotton picking, husking of corn, and fall plowing will complete the season's field work.

Maximum temperature, 79°; minimum, 30°; precipitation, 0.09 inch.

DALHART:

A rather cool cloudy week with only sufficient moisture to record on two days and 0.14 inch on another day has delayed fall harvesting and has not furnished sufficient moisture for winter wheat. Many farmers complain that their early seeding of winter wheat has died. This was to be expected with the rainfall being only sufficient to furnish moisture for germination in most cases. On account of insufficient moisture to furnish germination on all soil preparations, the winter wheat rotation and variety plots have not been seeded on the station. The winter rye rotation plots also remain to be seeded. Stands would have been thin even on the best preparations had the seeding been accomplished. The present plans are to seed after a severe freeze even if moisture has not been received. Another temperature of 31° during the week just killed the tips of the tender vegetation as did the September frost. This section has not had a real killing frost to kill all veg-

etation, although a few miles in a north or east direction finds all vegetation killed.

Maximum temperature, 80°; minimum, 31°; precipitation, 0.17 inch.

BIG SPRING:

Weather conditions were very unfavorable for harvesting during the greater part of the past week. Heavy dew and fog permitted only part time heading of milo during the first two days. Rains varying from 0.02 to 0.83 inch have fallen during the last four days. This together with continuous cloudy weather has stopped all field work. If this kind of weather continues, it is probable that milo heads will mold or sprout before they can be harvested.

Cotton maturity is also being delayed. Station cotton is opening slowly, but there will not be enough open to justify picking until after the first of November. This will be 60 days later than the first picking is normally made. This same condition exists throughout the county as the gin records show. Normally this county would have ginned 6-8 thousand bales by this time; to date there has been only about 1,500 bales ginned.

Station wheat plots were seeded October 21; with present moisture conditions they should emerge to good stands.

Other work has consisted of installing water bowls at the feed pens and repairing machinery.

Maximum temperature, 85°; minimum, 36°; precipitation, 1.70 inches.

LAWTON:

A narrow range in temperatures prevailed October 12 to 20 when the maximum averaged 83° and the minimum averaged 64°. The low wind velocity, abundant sunshine, and a good supply of surface moisture during this period was very favorable to maturity of cotton and the growth of small grains and fields of late planted feed crops.

A sudden change in the weather on the 22nd threatened freezing temperatures, but cloudy skies and a high wind velocity on 2 days resulted in 1.55 inches precipitation on 5 dates, October 23 to 28. The minimum temperature for this period was 40°, the lowest recorded to date. The rain fell gently, and the soil now carries sufficient moisture to maintain small grains in good winter condition and to permit late fall tillage in a very satisfactory manner. Heavy fogs the latter part of the past week allowed the ground to dry slowly, and such field operations as cotton picking has been at a standstill for several days.

Wheat in this vicinity and for 150 miles northeast is in good condition, but nearly all of it appears to have been planted later than usual and grazing will not be available for some time. Late planted fields of sorghums are growthy and well headed, but maturity has approached very slowly and the crops will not reach a mature stage now. The fields are wet, and the questions of frost and harvest are pertinent.

WOODWARD:

The past week has been one of clouds, mist, and precipitation. Rainfall all told since starting is as follows:

October 16 - 0.54; 17th - 0.36; 19th - Trace; 20th - 0.84; 21st - 0.02; 23rd - 0.09; 24th - 0.45; Total - 2.30inches.

Nearly all of this came slowly and soaked in. The soil was not packed, so wheat that was planted "dry" is coming up nicely. Conditions for planting are all that can be desired.

Typical of dry farmer reaction however, is the remark of one

farmer that "We had to have rain, but after this drizzle I am about ready for another drought." Everyone is of course anxious for dry settled weather to complete seeding and harvest of row crops.

There can hardly develop as much wheat pasture as there was last winter, but there is far more feed otherwise so there should be little distress for farm animals.

The rich fall coloring of the foliage is marred by a plentiful sprinkling of bare limbs and whole trees that died from drought during the summer. Chrysanthemums and roses are still blooming freely as is Heckrotti honeysuckle.

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